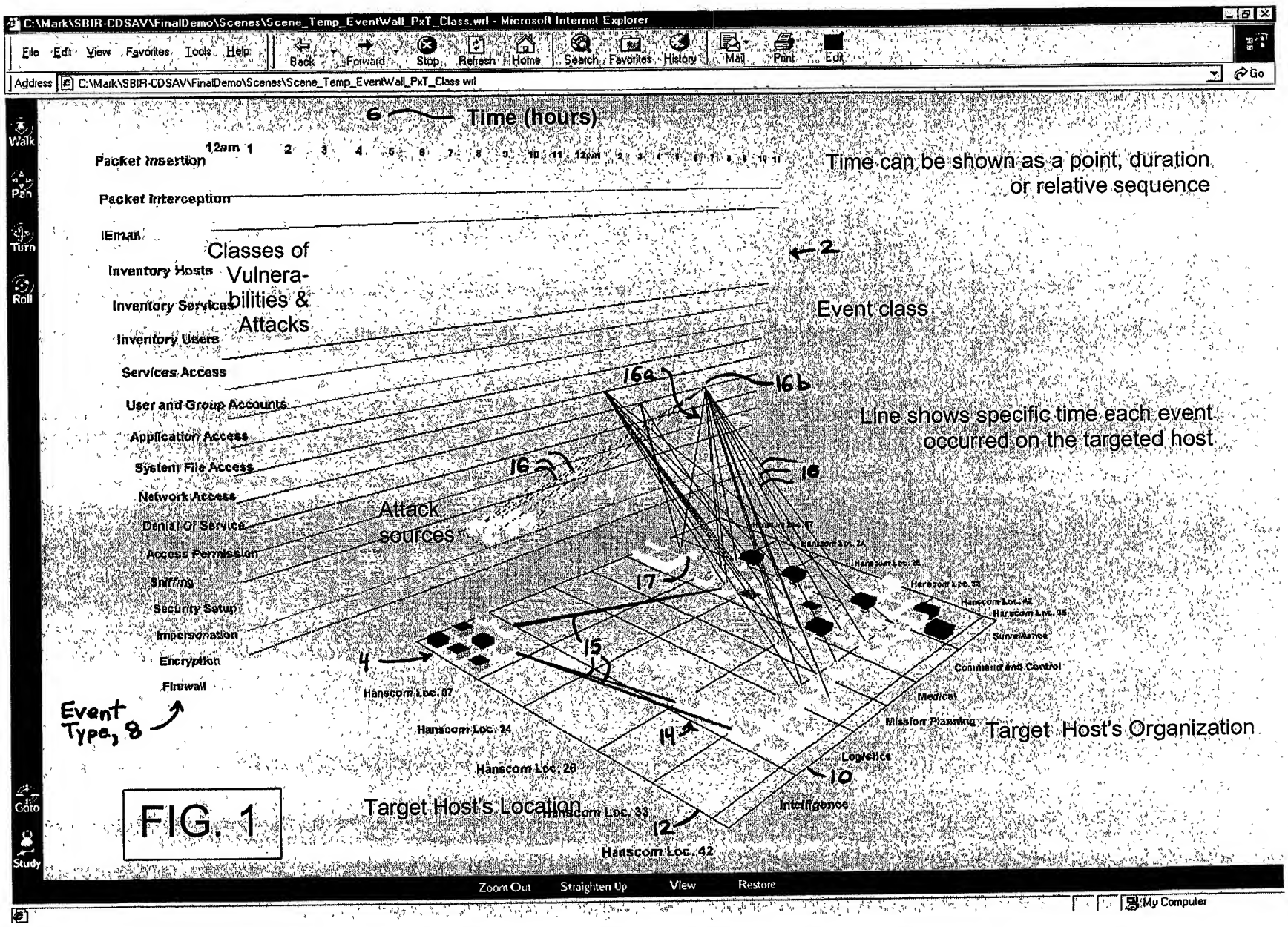

C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Temp_EventWall_PxT_Class.wrl - Microsoft Internet Explorer
Time (hours)
Packet Insertion
Packet Interception
Email
Inventory Hosts
Inventory Services
Inventory Users
Services Access
User and Group Accounts
Application Access
System File Access
Network Access
Denial Of Service
Access Permission
Sniffing
Security Setup
Impersonation
Encryption
Firewall
Classes of Vulnera-bilities & Attacks
Event Type, 8
Attack sources
Time can be shown as a point, duration or relative sequence
Event class
Line shows specific time each event occurred on the targeted host
Target Host's Organization
Target Host's Location
Hanscom Loc. 07
Hanscom Loc. 24
Hanscom Loc. 28
Hanscom Loc. 33
Hanscom Loc. 42
Surveillance
Command and Control
Medical
Mission Planning
Logistics
Intelligence
Zoom Out
Straighten Up
View
Restore
My Computer

FIG. 1

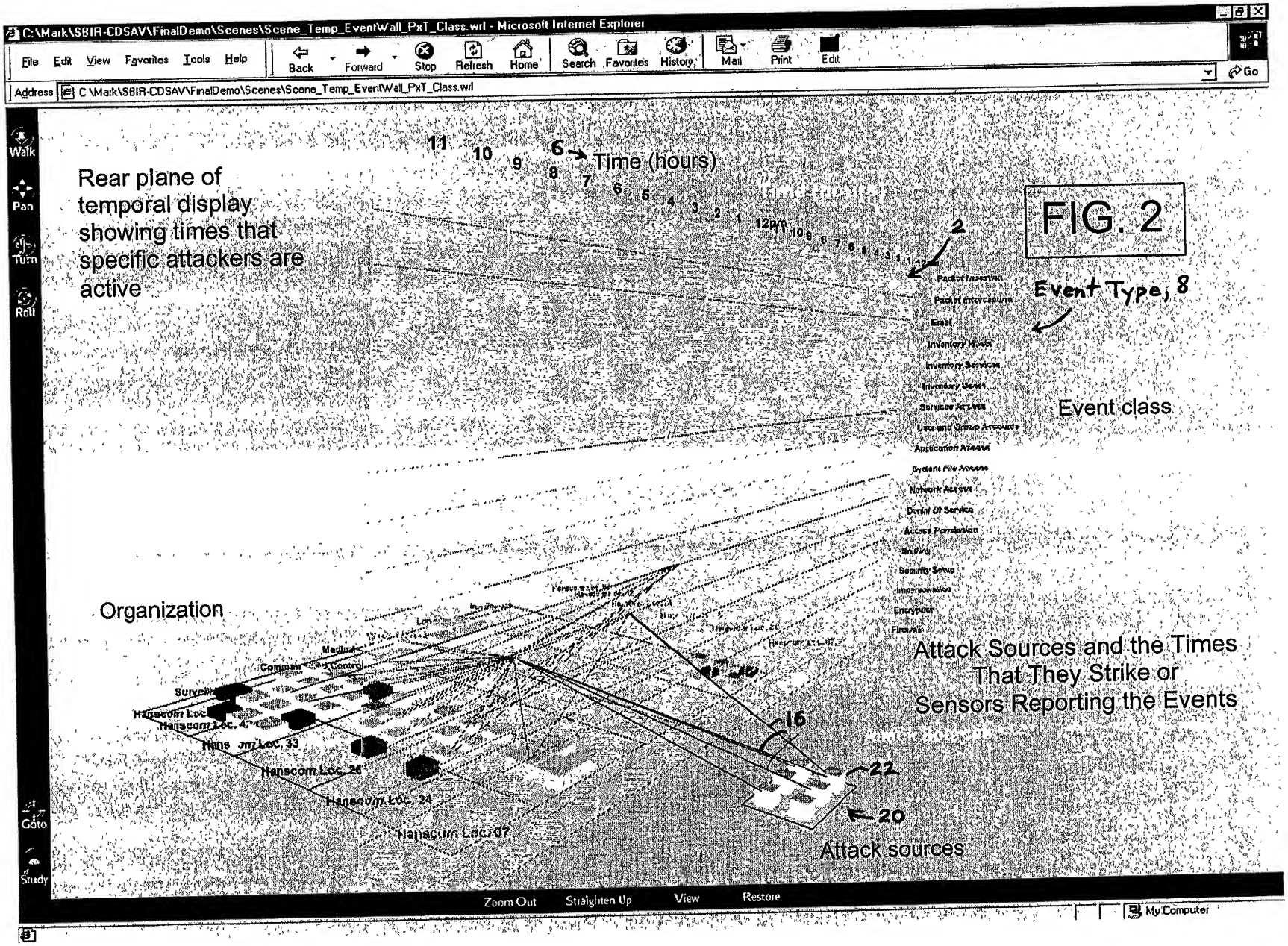

C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Temp_EventWall_PxT_Class.wrl - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Temp_EventWall_PxT_Class.wrl
Walk
Pan
Turn
Roll
Goto
Study
Rear plane of temporal display showing times that specific attackers are active
11 10 9 8 7 6 5 4 3 2 1 12pm 10 9 8 7 6 5 4 3 2 1 12am
6
Time (hours)
2
Event Type, 8
Event class
Organization
Hanscom Loc. 4
Hanscom Loc. 33
Hanscom Loc. 24
Hanscom Loc. 34
Hanscom Loc. 07
16
22
20
Attack sources
Attack Sources and the Times That They Strike or Sensors Reporting the Events
Zoom Out
Straighten Up
View
Restore
My Computer

FIG. 2

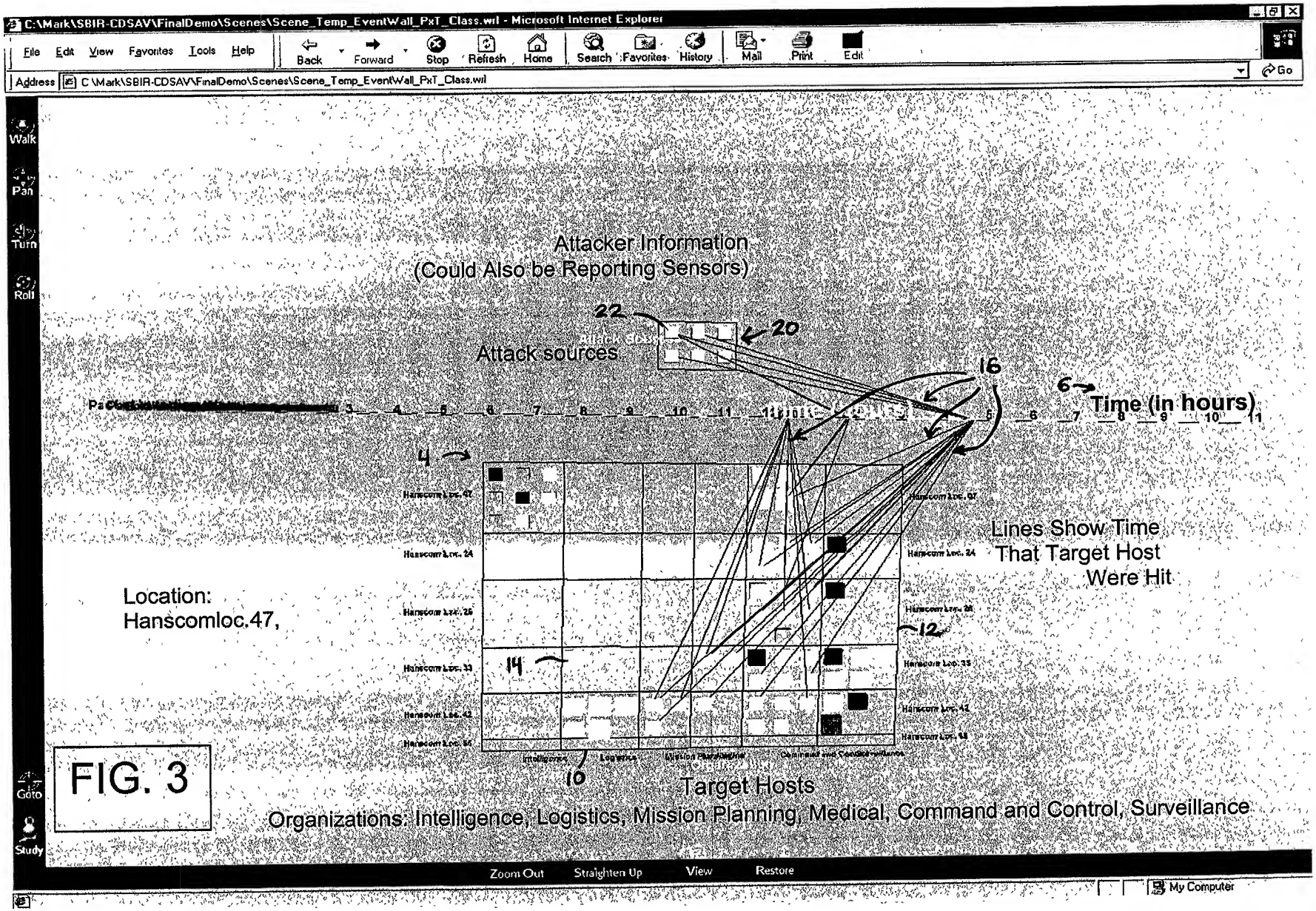

C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Temp_EventWall_PxT_Class.wrl - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Temp_EventWall_PxT_Class.wrl
Go
Walk
Pan
Turn
Roll
Goto
Study
Attacker Information
(Could Also be Reporting Sensors)
22
20
Attack sources
16
6
Time (in hours)
3 4 5 6 7 8 9 10 11
4
Hanscom Loc. 47
Hanscom Loc. 24
Hanscom Loc. 25
Hanscom Loc. 33
Hanscom Loc. 42
Hanscom Loc. 55
Lines Show Time
That Target Host
Were Hit
Location:
Hanscomloc.47,
12
14
10
Intelligence
Logistics
Command and Control
Target Hosts
Organizations: Intelligence, Logistics, Mission Planning, Medical, Command and Control, Surveillance
Zoom Out
Straighten Up
View
Restore
My Computer

FIG. 3

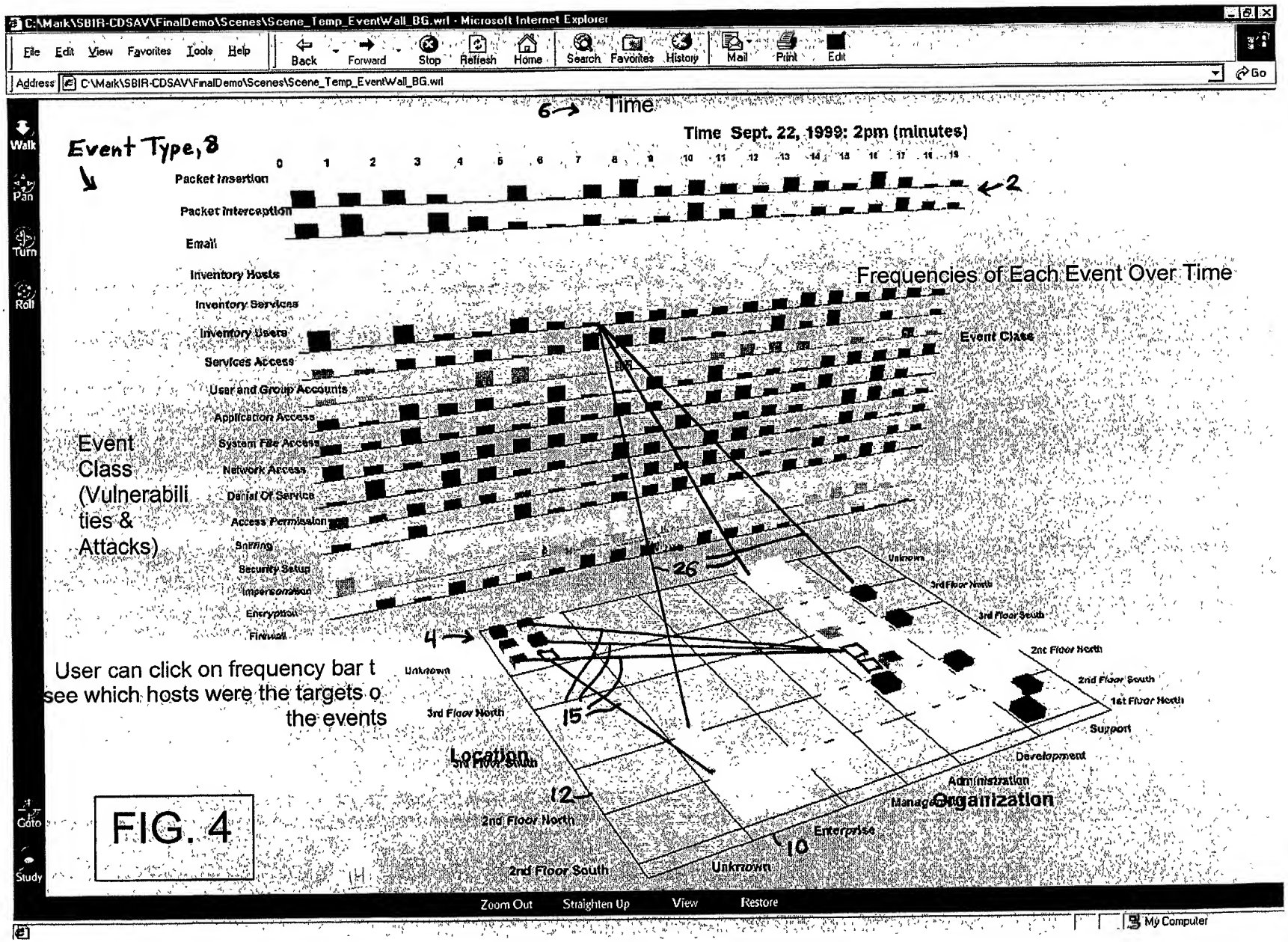
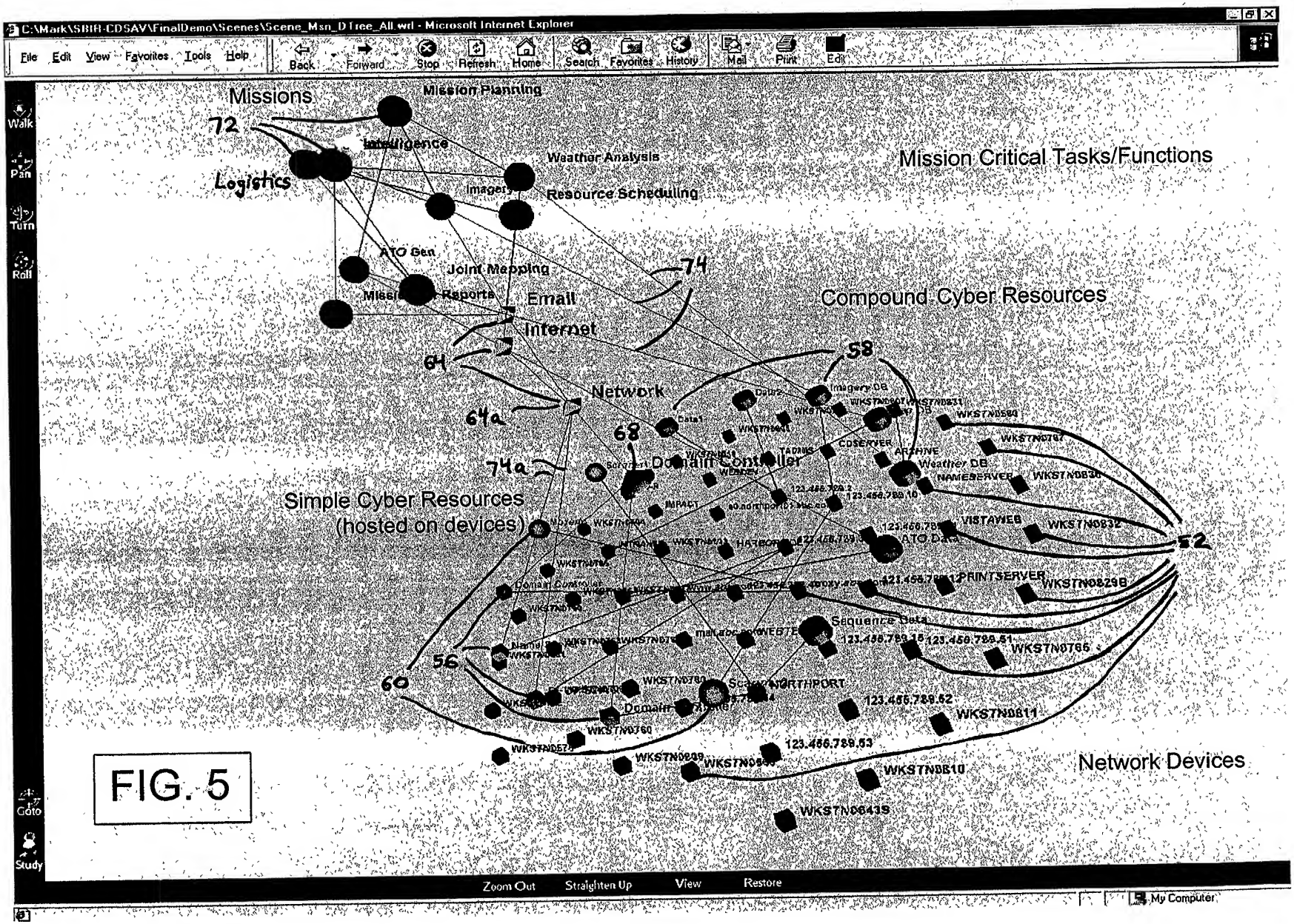
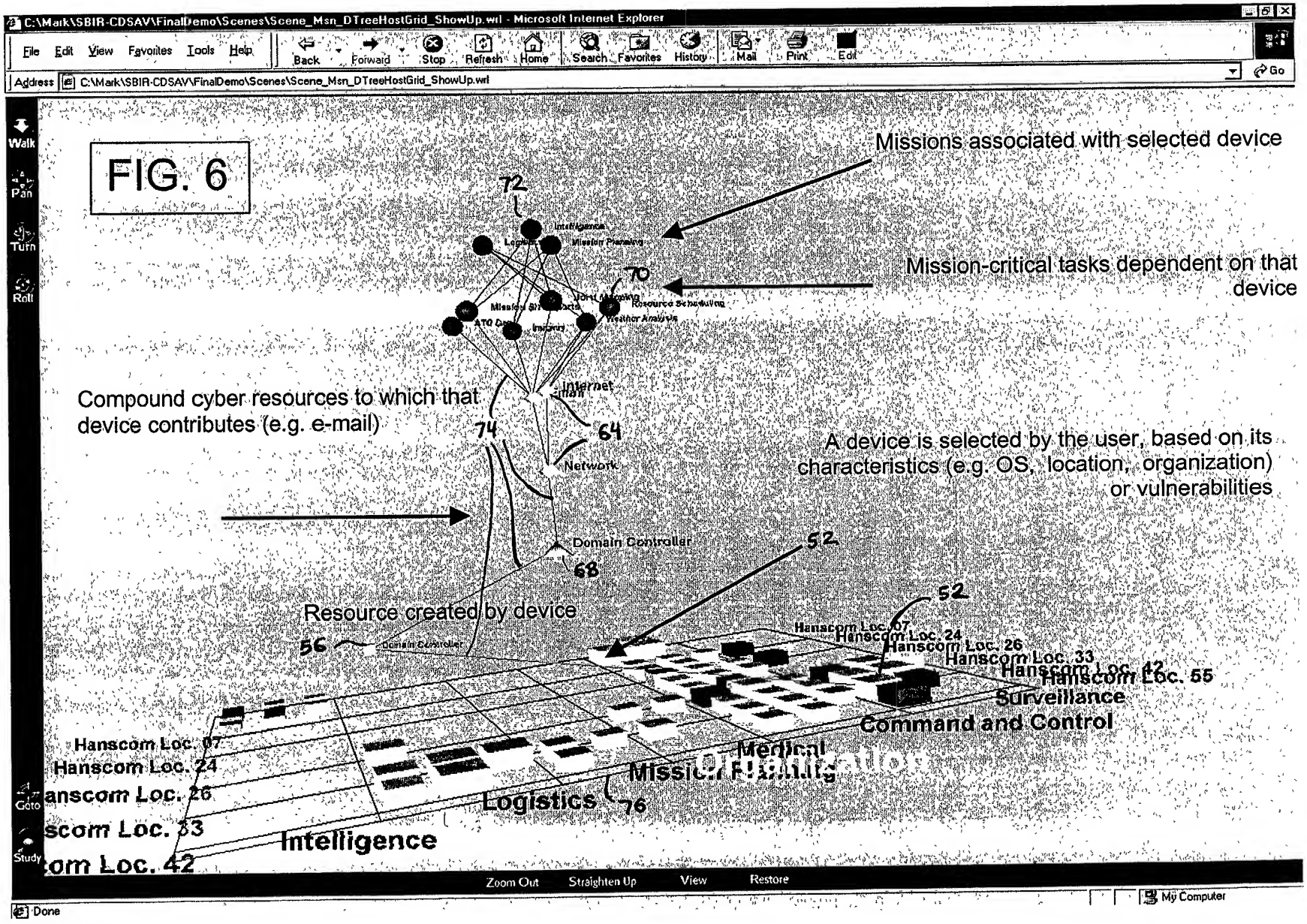

C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Temp_EventWall_BG.wrl - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Temp_EventWall_BG.wrl
Go
Walk
Pan
Turn
Roll
Goto
Study
6 → Time
Time Sept. 22, 1999: 2pm (minutes)
Event Type, 8
Packet Insertion
Packet Interception
Email
Inventory Hosts
Inventory Services
Inventory Users
Services Access
User and Group Accounts
Application Access
System File Access
Network Access
Denial Of Service
Access Permission
Spoofing
Security Setup
Impersonation
Encryption
Firewall
2
Frequencies of Each Event Over Time
Event Class
Event Class (Vulnerabilities & Attacks)
26
4
15
12
10
Unknown
3rd Floor North
3rd Floor South
2nd Floor North
2nd Floor South
1st Floor North
Support
Development
Administration
Management
Organization
Enterprise
Location
User can click on frequency bar t see which hosts were the targets o the events
Zoom Out
Straighten Up
View
Restore
My Computer

FIG. 4


C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Msn_DTree_All.wrl - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Walk
Pan
Turn
Roll
Goto
Study
Missions
72
Mission Planning
Intelligence
Logistics
Weather Analysis
Imagery
Resource Scheduling
ATO Gen
Joint Mapping
Missi
Reports
Email
Internet
74
Mission Critical Tasks/Functions
Compound Cyber Resources
58
64
62
64a
Network
68
74a
Domain Controller
Simple Cyber Resources
(hosted on devices)
52
56
60
Network Devices
FIG. 5
Zoom Out
Straighten Up
View
Restore
My Computer

B]


C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Msn_DTreeHostGrid_ShowUp.wrl - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address C:\Mark\SBIR-CDSAV\FinalDemo\Scenes\Scene_Msn_DTreeHostGrid_ShowUp.wrl
Go
Walk
Pan
Turn
Roll
Goto
Study
FIG. 6
Missions associated with selected device
Mission-critical tasks dependent on that device
Compound cyber resources to which that device contributes (e.g. e-mail)
A device is selected by the user, based on its characteristics (e.g. OS, location, organization) or vulnerabilities
Resource created by device
72
70
74
64
68
52
56
Internet
Network
Domain Controller
Hanscom Loc. 07
Hanscom Loc. 24
Hanscom Loc. 26
Hanscom Loc. 33
Hanscom Loc. 42
Hanscom Loc. 55
Surveillance
Command and Control
Logistics
76
Intelligence
Zoom Out
Straighten Up
View
Restore
Done
My Computer